FILE 'HOME' ENTERED AT 12:36:33 ON 04 MAR 2002)

FILE 'MEDLINE, BIOSIS, CAPLUS, EMBASE, USPATFULL' ENTERED AT 12:37:04 ON 04 MAR 2002

L1 43 S PYRUVATE(W)FORMATE(W)LYASE(W)GENE?
L2 25 DUPLICATE REMOVE L1 (18 DUPLICATES REMOVED)
L3 2 S L2 (P)RECOMBINANT?

L3 ANSWER 1 OF 2 CAPLUS COPYRIGHT 2002 ACS
AN 1998:667971 CAPLUS
DN 129:286729
TI Recombinant cells that highly express chromosomally-integrated heterologous genes
IN Ingram, Lonnie O.; Ohta, Kazuyoshi; Wood, Brent E.
PA University of Florida Research Foundation, Inc., USA
SO U.S., 25 pp. Cont.-in-part of U.S. Ser. No. 13,658, abandoned.
CODEN: USXXAM
DT Patent
LA English
FAN.CNT 10

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	US 5821093	A	19981013	US 1994-363868	19941227
	US 5000000	A	19910319	US 1989-352062	19890515
	US 6107093	A	20000822	US 1998-134403	19980814
	AU 9918586	A1	19990909	AU 1999-18586	19990305
PRAI	US 1988-239099	B2	19880831		
	US 1989-352062	A2	19890515		
	US 1990-624227	B1	19901207		
	US 1993-13658	B2	19930204		
	US 1992-946290	A2	19920917		
	US 1994-363868	A1	19941227		
	AU 1996-61946	A3	19960808		

AB Recombinant host cells are obtained that comprise (a) a heterologous, polypeptide-encoding polynucleotide segment, stably integrated into a chromosome, which is under transcriptional control of an endogenous promoter and (b) a mutation that effects increased expression of the heterologous segment, resulting in enhanced prodn. by the host cells of each polypeptide encoded by that segment, relative to prodn. of each polypeptide by the host cells in the absence of the mutation. The increased expression thus achieved is retained in the absence of conditions that select for cells displaying such increased expression. When the integrated segment comprises, for example, ethanol-prodn. genes from an efficient ethanol producer like Zymomonas mobilis, recombinant Escherichia coli and other enteric bacterial cells within the present invention are capable of converting a wide range of biomass-derived sugars efficiently to ethanol. Mutations are present in the formate reductase (frd) gene to impair succinate prodn. and/or the recA gene to impair recombination in the cell.

L3 ANSWER 2 OF 2 USPATFULL
AN 2000:109599 USPATFULL
TI Recombinant cells that highly express chromosomally-integrated heterologous genes
IN Ingram, Lonnie O., Gainesville, FL, United States
Ohta, Kazuyoshi, Gainesville, FL, United States
Wood, Brent E., Gainesville, FL, United States
PA University of Florida Research Foundation, Inc., Gainesville, FL, United States (U.S. corporation)
PI US 6107093 20000822
AI US 1998-134403 19980814 (9)
RLI Continuation of Ser. No. US 1994-363868, filed on 27 Dec 1994, now patented, Pat. No. US 5821093 which is a continuation-in-part of Ser. No. US 1993-13658, filed on 4 Feb 1993, now abandoned which is a continuation of Ser. No. US 1990-624227, filed on 7 Dec 1990, now

abandoned which is a continuation-in-part of Ser. No. US 1989-352062, filed on 15 May 1989, now patented, Pat. No. US 5000000 which is a continuation-in-part of Ser. No. US 1988-239099, filed on 31 Aug 1988, now abandoned which is a continuation-in-part of Ser. No. US 1992-946290, filed on 17 Sep 1992, now patented, Pat. No. US 5487989

DT Utility

FS Granted

EXNAM Primary Examiner: Brusca, John S.

LREP Lahive & Cockfield, LLP, Hanley, Esq., Elizabeth A., Lauro, Esq., Peter C.

CLMN Number of Claims: 49

ECL Exemplary Claim: 1

DRWN 13 Drawing Figure(s); 8 Drawing Page(s)

LN.CNT 2293

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

AB Recombinant host cells are obtained that comprise (A) a heterologous, polypeptide-encoding polynucleotide segment, stably integrated into a chromosome, which is under transcriptional control of an endogenous promoter and (B) a mutation that effects increased expression of the heterologous segment, resulting in enhanced production by the host cells

of each polypeptide encoded by that segment, relative to production of each polypeptide by the host cells in the absence of the mutation. The increased expression thus achieved is retained in the absence of conditions that select for cells displaying such increased expression. When the integrated segment comprises, for example, ethanol-production genes from an efficient ethanol producer like Zymomonas mobilis, recombinant Escherichia coli and other enteric bacterial cells within the present invention are capable of converting a wide range of biomass-derived sugars efficiently to ethanol.

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